Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A chain sprocket for roller chain drives, said sprocket having a sprocket center and symmetric teeth spaced by seatings for chain rollers, at least some sprocket teeth have flank profiles differing from one another and disposed in ~~an~~ a randomized arrangement effective to reduce noise generated by meshing of the chain rollers with the sprocket, the flank profiles selected to maintain a constant spacing between the seatings of the chain rollers and the sprocket center.

Claims 2-9 (Canceled).

Claim 10 (Currently Amended): A roller or bushing chain and sprocket system, the system comprising:

a roller or bushing chain having links connected by rollers or bushings;

a plurality of symmetric teeth disposed about the circumference of the sprocket having roots defined between adjacent teeth for receiving the rollers or bushings, the sprocket teeth each having a flank profile; and

at least a first flank profile and at least a second flank profile, the second flank profile being different from the first flank profile, the first and second flank profiles arranged in a randomized pattern effective to reduce noise generated by contact between the rollers or bushings of the chain and the sprocket.

Claim 11 (Previously Presented): A roller or bushing chain and sprocket system according to claim 10, wherein the roots each have a root radius r_1 and a constant root diameter d_f.

Claim 12 (Previously Presented): A roller or bushing chain and sprocket system according to claim 11, wherein the first flank profile is defined by a tooth flank radius r_{e1}, the tooth flank radius r_{e1} varying between a maximum tooth flank radius r_{e1} max and a minimum tooth flank radius r_{e1} min, and the second flank profile is defined by a tooth flank radius r_{e2} different from the tooth flank radius r_{e1}, the tooth flank radius r_{e2} varying between a maximum tooth flank radius r_{e2} max and a minimum tooth flank radius r_{e2} min.

Claim 13 (Previously Presented): A roller or bushing chain and sprocket system according to claim 12, wherein the flank profiles between each pair of adjacent teeth have an angle α between the root radius r_1 and the tooth flank radius, the angle α varying according to the adjacent flank profiles effective to maintain tangency between each tooth flank radius and root radius r_1.

Claim 14 (Previously Presented): A roller or bushing chain and sprocket system according to claim 12, wherein the sprocket comprises teeth having at least a third flank profile, the third flank profile being different from the first and second flank profiles, the first, second, and third flank profiles arranged in a pattern effective to reduce noise generated by contact between the chain and the sprocket.

Claim 15 (Previously Presented): A roller or bushing chain and sprocket system according to claim 14, wherein the third flank profile is defined by a tooth flank radius r_{e3} different from the tooth flank radius r_{e1} and the tooth flank radius r_{e2}, the tooth flank radius r_{e3} varying between a maximum tooth flank radius r_{e3} max and a minimum tooth flank radius r_{e3} min.

Claim 16 (Previously Presented): A roller or bushing chain and sprocket system according to claim 10, wherein the first and second flank profiles are selected so that the sprocket engages the chain at a different pressure angle for teeth having the first flank profile than for teeth having the second flank profile.

Claim 17 (Previously Presented): A roller or bushing chain and sprocket system according to claim 10, wherein the sprocket has a constant outer diameter d_a.

Claim 18 (Previously Presented): A roller or bushing chain and sprocket system according to claim 10, wherein the first and second flank profiles are selected to maintain a constant chordal pitch between adjacent teeth.

Claim 19 (Previously Presented): A roller or bushing chain and sprocket system according to claim 10, wherein each tooth has a first side and a second side, the first and second sides for each respective tooth having an identical tooth flank radius r_{en}.

Claim 20 (Currently Amended): A method of providing a roller or bushing chain and sprocket system, the method comprising:

providing a roller or bushing chain having a plurality of links connected by rollers or bushings;

defining a plurality of symmetric teeth disposed about the circumference of the sprocket having roots between adjacent teeth for receiving the rollers or bushings of the chain, the sprocket teeth each having a flank profile;

providing at least a first flank profile and at least a second flank profile, the second flank profile being different from the first flank profile; and

arranging the first and second flank profiles in a randomized pattern effective to reduce noise generated by contact between the rollers or bushings of the chain and the sprocket.

Claim 21 (Previously Presented): A method of providing a system according to claim 20, including providing each root with a radius r_1 and the roots with a constant root diameter d_f.

Claim 22 (Previously Presented): A method of providing a system according to claim 21, including defining the first flank profile by a tooth flank radius r_{e1}, the tooth flank radius

r_{e1} varying between a maximum tooth flank radius r_{e1} max and a minimum tooth flank radius r_{e1} min, and defining the second flank profile a tooth flank radius r_{e2} different from the tooth flank radius r_{e1}, the tooth flank radius r_{e2} varying between a maximum tooth flank radius r_{e2} max and a minimum tooth flank radius r_{e2} min.

Claim 23 (Previously Presented): A method of providing a system according to claim 22, including providing the flank profiles between each pair of adjacent teeth with an angle α between the root radius r_1 and the tooth flank radius and varying the angle α according to the adjacent flank profiles effective to maintain tangency between each tooth flank radius and root radius r_1.

Claim 24 (Previously Presented): A method of providing a system according to claim 22, including providing the sprocket with teeth having at least a third flank profile, the third flank profile being different from the first and second flank profiles, the first, second, and third flank profiles arranged in a pattern effective to reduce noise generated by contact between the rollers or bushings of the chain and the sprocket.

Claim 25 (Previously Presented): A method of providing a system according to claim 24, including defining the third flank profile by a tooth flank radius r_{e3} different from the tooth flank radius r_{e1} and the tooth flank radius r_{e2}, the tooth flank radius r_{e3} varying between a maximum tooth flank radius r_{e3} max and a minimum tooth flank radius r_{e3} min.

Claim 26 (Previously Presented): A method of providing a system according to claim 20, including selecting the first and second flank profiles so that the sprocket engages the chain at a different pressure angle for teeth having the first flank profile than for teeth having the second flank profile.

Claim 27 (Previously Presented): A method of providing a system according to claim 20, including configuring the sprocket to have a constant outer diameter d_a.

Claim 28 (Previously Presented): A method of providing a system according to claim 20, including selecting the first and second flank profiles to maintain a constant chordal pitch between adjacent teeth.

Claim 29 (Previously Presented): A method of providing a system according to claim 20, including providing each tooth with a first side and a second side and configuring the flank profile for each respective tooth to have an identical tooth flank radius r_e on the first side and the second side.

Claim 30 (Currently Amended): A roller or bushing chain and sprocket system, the system comprising:

a roller or bushing chain having links connected by rollers or bushings;

a plurality of symmetric teeth disposed about the circumference of the sprocket, the sprocket teeth each having a flank profile;

at least a first flank profile and at least a second flank profile, the second flank profile being different from the first flank profile; and

means for arranging the first and second flank profiles in a randomized pattern to reduce noise generated by contact between the rollers or bushings of the chain and the sprocket.

Claim 31 (Currently Amended): A roller or bushing chain and sprocket system, the system comprising:

a roller or bushing chain having links connected by rollers or bushings;

a plurality of symmetric teeth disposed about the circumference of the sprocket, the sprocket teeth each having a flank profile; and

at least a first flank profile, at least a second flank profile, and at least a third flank profile, the first flank profile being different from the second and third flank profiles and the second flank profile being different from the third flank profile, the first, second, and third flank profiles arranged in a randomized pattern effective to reduce noise generated by contact between the rollers or bushings of the chain and the sprocket.

Claim 32 (Currently Amended): A roller chain and sprocket system, the ~~sprocket~~ system comprising:

a roller or bushing chain having links connected by rollers or bushings;

a plurality of symmetric teeth disposed about the circumference of the sprocket, the sprocket teeth each having a flank profile with a tooth flank radius r_e, each tooth having first and second sides having an identical tooth flank radius r_e;

roots defined between pairs of adjacent teeth for receiving rollers or bushings of the ~~roller~~ chain, each root having a root radius r_1; and

a plurality of different flank profiles each having a different tooth flank radius r_{en}, the teeth flank radii varying between a maximum tooth flank radius r_e max and a minimum tooth flank radius r_e min, the different flank profiles arranged in a randomized pattern effective to reduce noise generated by contact between the roller chain and the sprocket by varying the pressure angle at which the ~~roller~~ rollers or bushings of the chain contacts the roots while maintaining a constant root diameter d_f and a constant addendum circle diameter d_a.

Claim 33 (Currently Amended): A chain sprocket and roller chain drive system, said chain having a plurality of links connected by rollers and said sprocket having a sprocket center and symmetric teeth spaced by seatings for chain rollers, at least some sprocket teeth have flank profiles differing from one another and disposed in ~~an~~ a randomized arrangement effective to reduce noise generated by meshing of the chain rollers with the sprocket, the flank profiles selected to maintain a constant spacing between the chain rollers and the sprocket center when the chain rollers are in the seatings.